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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/680,514	10/07/2003	Siegfried Beisswenger	P03,0402	5036

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SCHIFF HARDIN, LLP
PATENT DEPARTMENT
6600 SEARS TOWER
CHICAGO, IL 60606-6473

EXAMINER

FERGUSON, MARISSA L

ART UNIT	PAPER NUMBER
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2854

DATE MAILED: 08/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/680,514	Applicant(s) BEISSWENGER ET AL.	
	Examiner Marissa L Ferguson	Art Unit 2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-45 and 47 is/are rejected.
- 7) ☒ Claim(s) 46 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3,7,8,11,12,15-19,21-23,25-27,28,32-35 and 38-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Schafer (US Patent 5,778,775).

Regarding claims 1,2 and 26, Schafer teaches a method and apparatus for providing a surface of the printing form with a wear-resistant layer (23) and providing cups in the surface (24) and wherein the wear-resistant layer is provided on the printing form before a formation of the cups (Column 2, Lines 52-59).

Regarding claims 3,22,23,28,41 and 42 Schafer teaches a method and apparatus wherein the wear-resistant layer comprises a hard material layer (Column 2, Lines 52-56) and is inherent that there is some degree of roughness provided in the surface of the wear-resistant layer.

Regarding claims 7,8,10,32 and 33, Schafer teaches a method and apparatus wherein the wear-resistant metallic layer comprised of chromium (Column 2, Lines 61-64).

Regarding claims 11,12,34 and 35, Schafer teaches a method and apparatus wherein a thickness of the layer is selected such that the cups are only partially provided in the layer (Figure 3).

Regarding claims 15-19,21 and 38-40, Schafer teaches a method and apparatus wherein the cups (24) are provided in the wear-resistant layer via engraving by means of a laser light (Column 2, Lines 56-58) and by means of a mechanical engraving unit (Column 1, Lines 16-26).

Regarding claims 25 and 27, Schafer teaches a method and apparatus wherein the printing form is for heliorotogravure (Column 1, Lines 22-62 and Column 2, Lines 52-59).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-6 and 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schafer (US Patent 5,778,775) in view of Chen et al. (US Patent 6,555,216).

Schafer teaches the method and apparatus claimed, however he does not explicitly disclose a wear-resistant layer made of a composite material mixture of a synthetic and particulate elements and wherein the particulate elements are formed from silica sand. Chen et al. teaches a surface containing a composite mixture of synthetic and particulate elements of silica sand (Column 2, Lines 17-67, Column 3, Lines 1-11 and Column 4, Lines 6-15). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention

taught by Schafer to include a surface containing composite mixtures as taught by Chen et al., since Chen et al. provides wear-resistant particles to improve wear and/or stain resistance to a surface.

3. Claims 14 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schafer (US Patent 5,778,775).

Regarding claims 14, and 37, Schafer teaches all that is claimed including cups with depths, however he does not explicitly disclose depth in a range between 15 and 35 μm . It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. It would have been obvious to provide the claimed depths of the cups since such modification would result in the cups providing necessary depressions in order to house wear resistant particles that are embedded in the surface.

4. Claims 9,10,13,20,24,36,43,44 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schafer (US Patent 5,778,775) in view of Huttl et al. (US Patent 5,252,360).

Regarding claims 9,10,20,24 and 43 Schafer teaches the method and apparatus claimed, however he does not explicitly disclose a layer that is provided on the printing form by means of one of a PVD method, polishing and grinding of a layer and applying a layer to a wear-resistant layer to form an etching mask. Huttl et al. teaches a process that provides a layer by PVD method, polishing and grinding a wear-resistant layer and provides a layer over a wear-resistant layer (Column 1, Lines 16-26, Column 2, Lines 39-52). It would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to modify the invention taught by Schafer to include a PVD process and provide a layer on a wear-resistant layer as taught by Huttl et al., since Huttl et al. provides the necessary processes in order increase the wear resistance and corrosion resistance.

Regarding claims 13 and 36, Schafer teaches the method and apparatus claimed, however he does not explicitly disclose a wear-resistant layer that is between 20 to 50 μm thick. Huttl et al. does disclose thickness layers of 4-15 μm thick (Column 4, Lines 36-40). However, he does not explicitly disclose the claimed layer between 20 to 50 μm thick. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. It would have been obvious to provide the claimed thickness of the layer since such modification would result in a harder layer resulting in a harder corrosion-resistant layer.

Regarding claims 44 and 47, Schafer teaches a core (22), a wear-resistant layer (23) and engraved cups (24). However he does not explicitly disclose a wear resistant layer having a Vicker's hardness greater than 110 kp/mm^2 . Huttl et al. teaches a wear resistant layer with several Vicker hardness quantities (Column 2, Lines 12-16 and Lines 39-52).). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Schafer to include a wear resistant layer with a Vickers hardness as taught by Huttl et al., since Huttl et al. provides the necessary hardness in order increase the wear resistance, corrosion resistance and for producing high precision gravures.

5. Claims 45 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schafer (US Patent 5,778,775) in view of George et al. (US Patent 4,029,013).

Schafer teaches the method and apparatus claimed, however he does not explicitly disclose a base layer that is provided between a wear-resistant layer and the core and the wear-resistant layer has a hardness greater than a hardness of the base layer. George et al. teaches a gravure printing apparatus that a backing layer (4) that is provided between a wear-resistant layer (2) and the core (10 and Figure 2). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Schafer to include a base layer between a wear resistant and core as taught by George et al., since George et al. teaches that is advantageous to provide base layer between two layers in order to assure quality printing.

Allowable Subject Matter

6. Claim 46 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reasons for Allowance

7. The following is an examiner's statement of reasons for allowance: Regarding claim 46, the prior art does not teach or render obvious cups that extend through the wear resistant layer and partially into said base layer.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marissa L Ferguson whose telephone number is (571) 272-2163. The examiner can normally be reached on (M-T) 6:30am-4:00pm and every other (F) 7:30am-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marissa L Ferguson
Examiner
Art Unit 2854

MLF



ANDREW H. HIRSHFELD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2854